

[0022] The invention claimed is:

1. An acid labile drug composition comprising:
an acid labile drug conjugated to ion exchange resin particles.
2. The composition of claim 1 wherein the acid labile drug is a proton pump inhibitor.
3. The composition of claim 2 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.
4. The composition of claim 1 wherein the ion exchange resin particles are anionic exchange resin particles.
5. The composition of claim 1 wherein the conjugated acid labile drug and resin particles are coated with a low acid content enteric coating.
6. The composition of claim 5 wherein the low acid content enteric coating has a potassium hydroxide equivalent acid content of under 200 mg per gram of coating.
7. The composition of claim 5 wherein the low acid content enteric coating comprises at least one of polyvinyl acetate phthalate, hydroxypropylmethylcellulose acetate phthalate and methacrylic acid copolymer S-100 polymers.
8. The composition of claim 7, wherein the low acid content enteric coating polymer has a free acid content of about 1.0% or less.
9. The composition of claim 8, wherein the low acid content enteric coating further comprises ethylcellulose.

10. A method of making an acid labile drug composition comprising:
slurrying ion exchange resin particles in a solution comprising an acid labile drug
and a solvent, thereby creating a drug resin complex; and
washing and drying said drug resin complex.
11. The method of claim 10 wherein the drug complex is sized to achieve a desired
particle size.
12. The method of claim 10 wherein the ion exchange resin particles are anionic
exchange resin particles.
13. The method of claim 10 wherein the acid labile drug is a proton pump inhibitors.
14. The method of claim 10 wherein the proton pump inhibitor is omeprazole,
esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.
15. A method of stabilizing an acid labile drug against degradation comprising:
conjugating an acid labile drug with ion exchange resin particles.
16. The method of claim 15 wherein the acid labile drug is a proton pump inhibitor.
17. The method of claim 16 wherein the proton pump inhibitor is omeprazole,
esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.
18. The method of claim 15 wherein the ion exchange resin particles are anionic
exchange resin particles.
19. A composition comprising a core containing an acid labile drug and a low acid
content enteric coating disposed directly on the core.
20. The composition of claim 19 wherein the low acid content enteric coating has a
potassium hydroxide equivalent acid content less than 200 mg per gram of coating.

21. The composition of claim 19 wherein the acid labile drug is a proton pump inhibitors.
22. The composition of claim 19 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.
23. The composition of claim 19 wherein the low acid content enteric coating comprises at least one of polyvinyl acetate phthalate and hydroxypropylmethylcellulose acetate phthalate.
24. The composition of claim 23, wherein the low acid content enteric coating further comprises ethylcellulose.
25. A method of making a self-suspending suspension comprising:
slurrying ion exchange resin particles in a solution comprising an acid labile drug and a solvent, thereby creating a drug complex;
washing and drying said drug complex;
sizing said complex to achieve an average particle size of about 45-80 microns;
and
dispersing the particles in a liquid to provide the self-suspending suspension.
26. The method of claim 25 further including a pharmaceutically acceptable buffering agent in an amount effective to maintain a pH of about 5-6.
27. The method of claim 25 further including a small amount of a viscosity modifier.
28. The method of claim 25 wherein the ion exchange resin is an anionic exchange resin.
29. The method of claim 25 wherein the acid labile drug is a proton pump inhibitor.

30. The method of claim 29 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.
31. A method of making an acid labile drug suspension comprising:
slurrying ion exchange resin particles in a solution comprising an acid labile drug and a solvent, thereby creating a drug complex;
washing and drying said drug complex; and
suspending said complex in an oil based suspension.
32. The method of claim 31 wherein the drug complex is sized to achieve a desired particle size.
33. The method of claim 31 wherein the resin is sized to achieve a desired particle size.
34. The method of claim 31 wherein the ion exchange resin particles are anionic exchange resin particles.
35. The method of claim 31 wherein the acid labile drug is a proton pump inhibitor.
36. The method of claim 35 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.
37. An acid labile drug powder composition for mixing with water or other liquid to form a suspension comprising acid labile drug conjugated to ion exchange resin particles.
38. The composition of claim 37 wherein the acid labile drug is a proton pump inhibitor.
39. The composition of claim 38 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.

40. The composition of claim 37 wherein the ion exchange resin particles are anionic exchange resin particles.

41. A coated acid labile drug composition in which the coating has a low acid content.

42. The composition of claim 41 wherein the coating is an enteric coating.

43. The composition of claim 42 wherein the coating incorporates a low permeability polymer.

44. The composition of claim 41 wherein the coating comprises at least one of polyvinyl acetate phthalate, hydroxypropylmethylcellulose acetate phthalate and methacrylic acid copolymer S-100 polymers.

45. A coated water sensitive drug composition in which the coating is a low acid content enteric coating which also incorporates a low permeability polymer.

46. The composition of claim 45 wherein the coating comprises at least one of polyvinyl acetate phthalate, hydroxypropylmethylcellulose acetate phthalate and methacrylic acid copolymer S-100 polymers.

47. The composition of claim 45 wherein the low permeability polymer is ethylcellulose.

48. A powdered drug composition capable of being reconstituted into a suspension comprising:
an active drug conjugated to ion exchange resin particles.

49. The composition of claim 48 wherein the active drug comprises a proton pump inhibitor.

50. The composition of claim 49 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.

51. The composition of claim 48 wherein the ion exchange resin particles are anionic exchange resin particles.

52. A method of treating severe erosive esophagitis, gastroesophageal reflux disease (GERD), pathological hypersecretary conditions, peptic ulcer disease and gastric ulcers comprising administering a drug composition comprising a proton pump inhibitor conjugated to ion exchange resin particles.

53. The method of claim 52 wherein the proton pump inhibitor is omeprazole, esomeprazole, lansoprazole, pantoprazole, rabeprazole or leminoprazole.

54. The method of claim 52 wherein the ion exchange resin particles are anionic exchange resin particles.